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Handbook of Instructions

We Sound Better

EX-3140A

Model 300DC Power Amplifier

Sn. 95UC70073

1-8-80

marantz®

MARANTZ CO., INC. 20525 NORDHOFF STREET, CHATSWORTH, CALIFORNIA 91311
A WHOLLY-OWNED SUBSIDIARY OF SUPERSCOPE INC., CHATSWORTH, CALIFORNIA 91311

FOREWORD

Congratulations! Judging by the stereo equipment you now own, you are no amateur when it comes to audio. Nevertheless, we urge you to study these instructions carefully. Our step-by-step procedures will assure you of receiving maximum enjoyment from the superb performance the Model 300DC is capable of giving.

PURCHASER'S RECORD

MODEL NO. _____
(Located on Front of Unit)

SERIAL NO. _____
(Located on Rear of Unit)

Cost _____ Date _____

This information becomes your permanent record of a valuable purchase. It should be filled in promptly then kept in a safe place along with your purchase receipt to be referred to as necessary for insurance purposes or when corresponding with Marantz.

IMPORTANT

WHEN SEEKING WARRANTY SERVICE, IT IS THE RESPONSIBILITY OF THE CONSUMER TO ESTABLISH PROOF AND DATE OR PURCHASE. (YOUR PURCHASE RECEIPT OR INVOICE IS ADEQUATE FOR SUCH PROOF.)

WARNING

TO PREVENT FIRE OR SHOCK HAZARD, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.

AFTER UNPACKING

The original packing material is specifically designed to protect the unit, and replacement packing material from Marantz is expensive. Therefore, it is advisable to retain all original packing material to prevent damage should you wish to transport or ship the Model 300DC in the future (refer to page 12 for repacking and shipping instructions). Be careful that you do not inadvertently throw away or lose the parts packed with the unit.

Please inspect your Power Amplifier carefully for any signs of shipping damage. Our very strict quality control and professional pride ensure that each left the factory in perfect condition. If the unit is damaged or fails to operate, immediately notify your dealer. If the unit was shipped to you directly, notify the transportation company without delay. Only you, the consignee, may institute a claim against the carrier for shipping damage. Save the carton and all packing material as evidence of damage for their inspection. Should assistance be required, the Marantz Company will cooperate fully in assisting your claim.

Please fill out and mail the Warranty Registration Card within ten days of purchase. The card will remain on file at the Marantz Company for the duration of the warranty period. We also strongly advise that you retain your sales receipt to provide proof of purchase in the event that Warranty service is sought.

A clear plastic cover has been placed on the front panel to prevent the styrofoam cushioning material from sticking to the panel during shipment. As such, it may be considered as part of the packing material, and it may be removed if you wish.

ABOUT THIS MANUAL

For convenience, this manual is divided into three parts. The first part covers installation. The second part covers operation. These two parts are written in simple, non-technical terms. The third part provides a more detailed description of the technical features of the Model 300DC and will be interesting to read after your system is set up and playing.

To provide a means for easily distinguishing between references to the controls and connection facilities of the Model 300DC and those of the other system components, **BOLDFACE** type is used for references to the Model 300DC. Notice that the spelling and abbreviations of all such markings appear exactly as lettered on the front and rear panels of the instrument.

TABLE OF CONTENTS

Preparation for Use 1
- Installation Methods 1
- Marantz Walnut Veneer Cabinet 1
- Custom Installation 2

Signal Connections 3
- Inputs 3
- DC Coupling & AC Coupling Switch 4
- Speaker Systems 4
- Using the Model 300DC with Two Sets of Speakers 4
- Speaker Phasing 4
- Operating Power Connections 5

Operation 6
Simplified Operating Procedures 6
Front Panel Features 6
- Power Switch 6
- Gain Controls 6
- Meters 6
- Meter Range Switches 6
- Peak Indicators 7

Technical Section 7
Technical Highlights 7
- Parallel Output Stage 7
- Protection Circuits 7
- Overload Protection 7
- Speaker Protection Relay 8
- Dynamic Shunt Meter Circuit 8
- Peak Indicator 8
- Circuit Description 8

Maintenance 11
- Cleaning 11
- Fuse Replacement 11
- In Case of Difficulty 11
- Repairs 12

Repacking for Shipment 12

LIST OF ILLUSTRATIONS

1. Model 300DC Shown in WC-110 Cabinet 1
2. Custom Mounting 2
3. Rear Panel 3
4. Connection Diagram 3
5. Spade Lug Terminals 4
6. Operation of Speaker Terminals 5
7. Connection to Speaker Switching Inputs 5
8. Front Panel 6
9. Typical Intermodulation Distortion Characteristics 9
10. Typical Total Harmonic Distortion Measurements 9
11. Functional Block Diagram 10
12. Repacking Illustration 12

PREPARATION FOR USE

In this section of the manual, you will find information about methods of attractively installing your new Marantz amplifier and about how to hook up the various wires and cables on the rear panel.

• INSTALLATION METHODS

The Model 300DC Amplifier can be installed in two basic ways: In a beautiful walnut veneer cabinet for placement on a table or shelf, or in your own cabinetry or custom installation.

• MARANTZ WALNUT VENEER CABINET

An attractive walnut veneer cabinet, Model WC-110, may be obtained from your Marantz dealer. The case provides for proper ventilation, and can be placed on furniture, or on a bookshelf. Complete instructions for installation are provided with the WC-110.

Figure 1. Model 300DC Shown in WC-110 Cabinet

• CUSTOM INSTALLATION

If you wish to install the Model 300DC in a custom cabinet, plan its location carefully. Pay close attention to the following requirements:

1. The amplifier is air cooled. Allow plenty of space between the Model 300DC, cabinet surfaces, and other components for adequate ventilation.
2. Allow enough room behind the unit to run cables.
3. Because of its weight, the Model 300DC cannot be supported by its front panel alone. The chassis should be supported by an internal shelf, a bracket, or similar means. If a solid shelf is used, provide one inch wood spacers at each corner of the chassis to allow the unit to have proper clearance from the shelf.
4. To avoid hum pickup in magnetic phono cartridges, allow at least 10 inches of space from amplifier to turntable.

Figure 3 is a side view of the Model 300DC in a custom enclosure, showing the internal shelf and bracing.

The opening in the cabinet front will be 16-3/8" wide by 5-3/4" high. Since the front panel of the Model 300DC is larger than the cutout, it will neatly hide the edges of the cut. Remove the plastic feet from the bottom of the unit, and slide it through the opening.

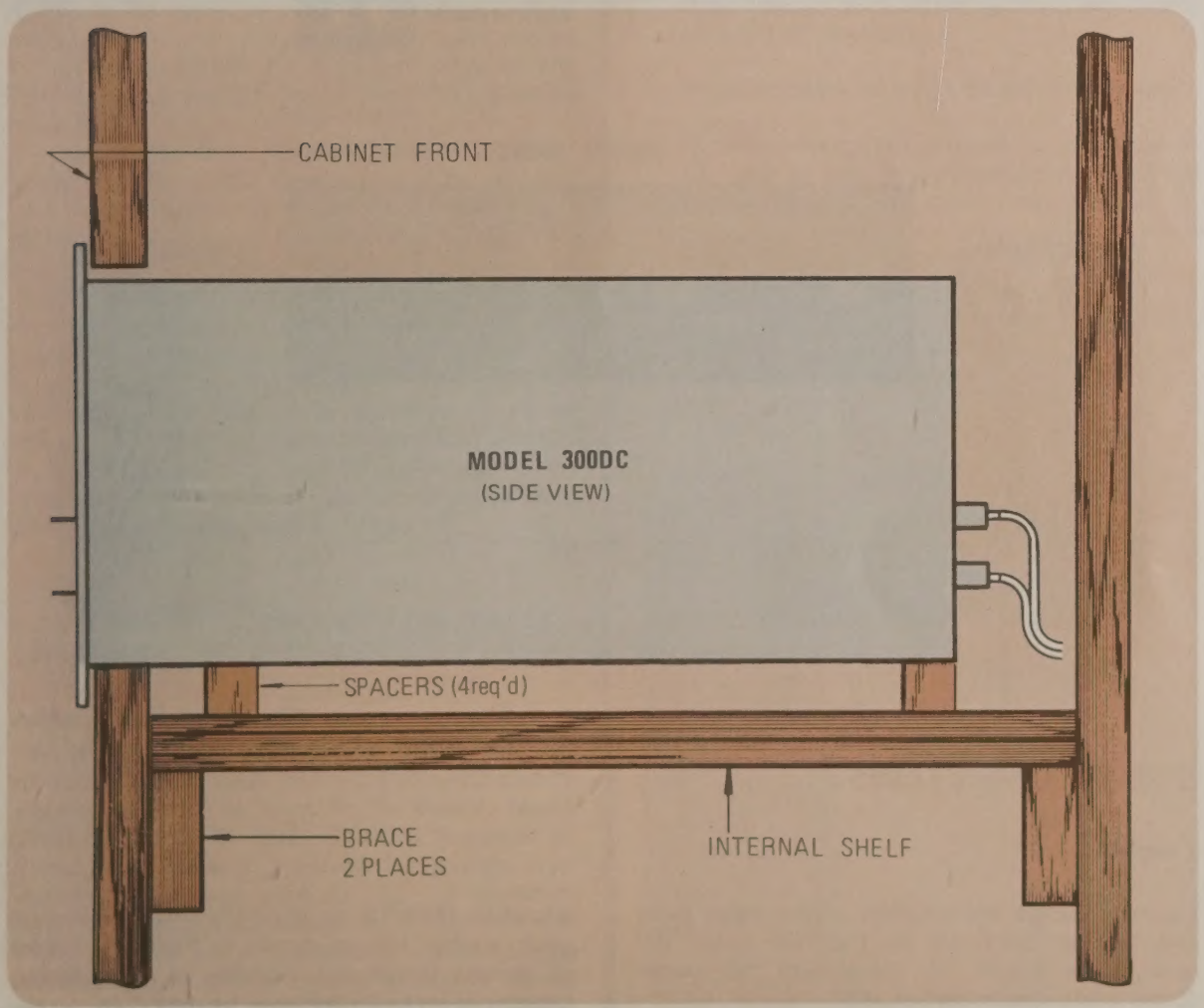

Figure 2. Custom Mounting

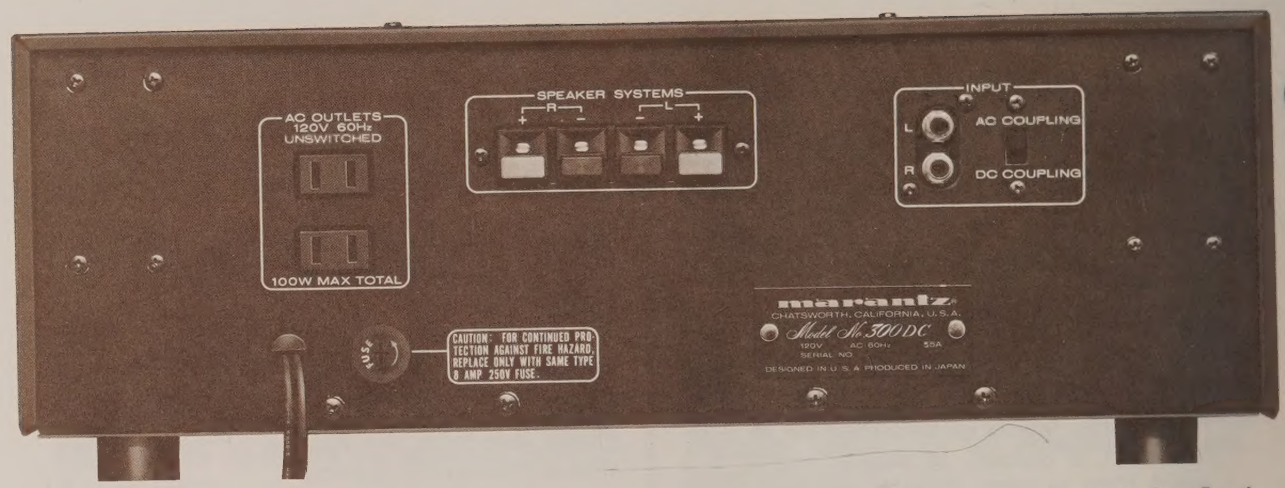

Figure 3. Rear Panel

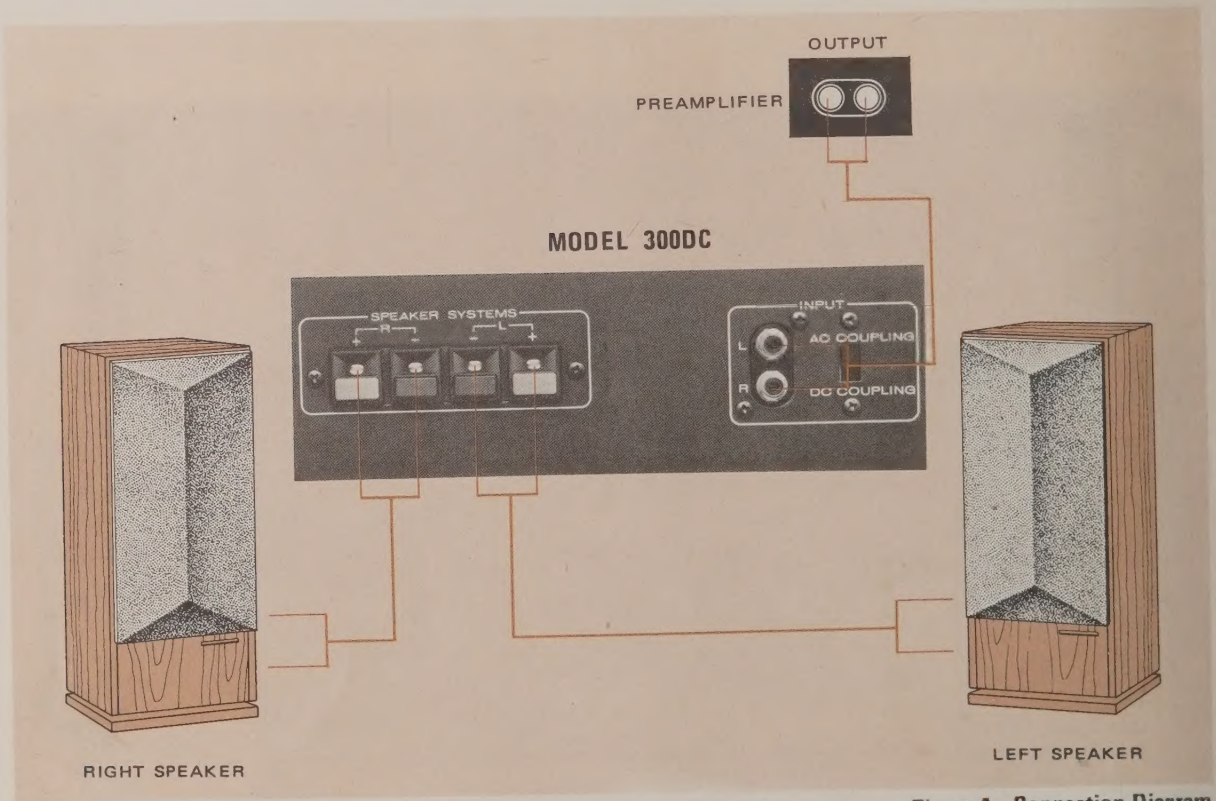

Figure 4. Connection Diagram

SIGNAL CONNECTIONS

• INPUTS

Figure 4 shows the location of the input jacks and speaker terminals on the rear panel. All connections should be made with the power to the entire system turned off.

Using stereo shielded audio cable, connect the amplifier **INPUTS** to the "OUTPUT" jacks on your preamplifier, as shown in Figure 5. Cables of various length are available at your dealer. Lengths of up to 25 feet may be used.

• DC COUPLING & AC COUPLING SWITCH

This switch is provided to protect Model 300DC from large output popping noise due to erroneous connection of expensive speakers, troubles of preamplifier or using a preamplifier not designed for DC amplifier.
Therefore, whenever there are possiblities of the above cases, please set this switch to the **AC COUPLING** position.

• SPEAKER SYSTEMS

To connect the speakers to the Model 300DC use ordinary #18 gauge stranded two-conductor lamp cord. If the desired cord length for either channel exceeds 30 feet, use #16 gauge wire or heavier. Strip about 1/2-inch of insulation from either end of both loudspeaker cords. Twist the strands of each conductor to prevent fraying. Examine the wires for polarity markings. One of each pair will probably be marked in any one of several ways. Check for a molded ridge on the insulation, a tracer thread, or one or more tinned strands.
To assure the best stereo separation and frequency response, the speakers must be properly phased. Normally, the positive terminal on each speaker should be connected to its respective (+) terminal on the Model 300DC and the negative or "common" terminal should be connected to its respective (–) terminal. Use the polarity markings on the wires to aid in making identical connections to each speaker. If your speakers use screw terminals, it is advisable to attach crimp-on "spade lug" terminal connectors to the wires at the end that will be connected to the speakers. (See Figure 6). At the amplifier end, connect the wires as shown in Figure 7.

• USING THE MODEL 300DC WITH TWO SETS OF SPEAKERS

The Model 300DC is capable of driving two sets of speakers when used in conjunction with switching circuitry such as found on the Marantz Model 3200, 3250, 3600, 3650, or 3800 Preamplifier. These new Marantz preamps incorporate convenient pushbutton controls and the necessary input and output terminals for MAIN and REMOTE speaker pairs. The speaker systems can be selected individually or simultaneously or turned off to allow private listening through headphones. To connect the Model 300DC using this arrangement, connect two short lengths of speaker wire directly from the **SPEAKER SYSTEMS** outputs of the Model 300DC to the SPEAKER SWITCHING INPUTS of the preamplifier as shown in Figure 8. Then, connect the speakers to the MAIN and REMOTE speaker terminals on the preamplifier. Use #18 gauge wire or heavier and observe correct polarity (phasing) throughout.

> **NOTE**
>
> Do not use 4 ohm speakers if main and remote speakers are to be used simultaneously. Use 8 or 16 ohm speakers only.

• SPEAKER PHASING

To verify that a pair of speakers are correctly phased, perform the following test:

1. Complete the necessary signal connections so that the program material may be played through the speakers.
2. Place the speakers in the center of the room.
3. Set the preamplifier controls to play a record (or radio or tape) monophonically with strong bass tones at a low volume level. Adjust the balance controls to obtain equal loudness from both loudspeakers.
4. Position the speakers about six inches apart, face-to-face. Listen, particularly to the apparent loudness of the bass tones.

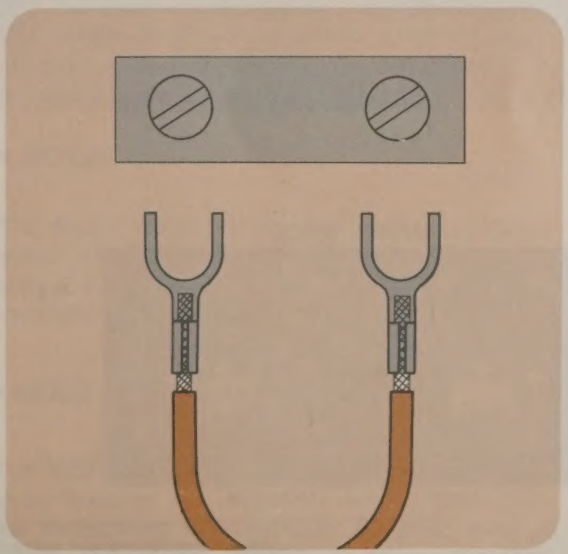

Figure 5. Spade Lug Terminals

5. Next, turn off all power, but do not disturb the VOLUME or BALANCE settings. Reverse the connections on the right speaker only. Turn on the power and listen again. If the bass tones now seem louder than in (3), you have corrected the phasing between the speakers. If the bass notes now sound softer, turn off the power and reconnect the speakers as they had been originally.

6. If an additional pair of speakers is connected through speaker switching circuitry in the preamplifier, and if they are intended to be used in the same room as the main speakers, check phasing between the remote speakers and the main speakers. Use the BALANCE control to play only two speakers at once, and invert the wiring on the remote speakers as necessary. Do not change the connections on the main speaker system.

7. Once having phased all speakers, you need not repeat this procedure in the future if you now mark the speaker connections and/or cables. Any method of coding is satisfactory, provided it enables you, in the future, to duplicate your now-correct hookup between speakers and amplifier.

Use caution when connecting your Model 300DC to a loudspeaker containing a built-in power supply, such as an electrostatic loudspeaker. The "common" connection terminal of such a speaker may be capacitively coupled to ground through its own power supply. To protect the Model 300DC from distortion and possible overload, make sure the (–) terminals of the Model 300DC are connected to the "common" terminals of such a loudspeaker system.

CAUTION

NEVER DIRECTLY CONNECT THE LOUDSPEAKER TERMINALS OF ONE CHANNEL IN PARALLEL WITH THOSE OF ANY OTHER. ANY RESULTING DAMAGE IS NOT COVERED UNDER WARRANTY.

• OPERATING POWER CONNECTIONS

For normal usage, plug the power cord into one of the "switched" convenience outlets on your preamplifier. With this arrangement, the Model 300DC will be controlled by the ON-OFF switch on the preamplifier.

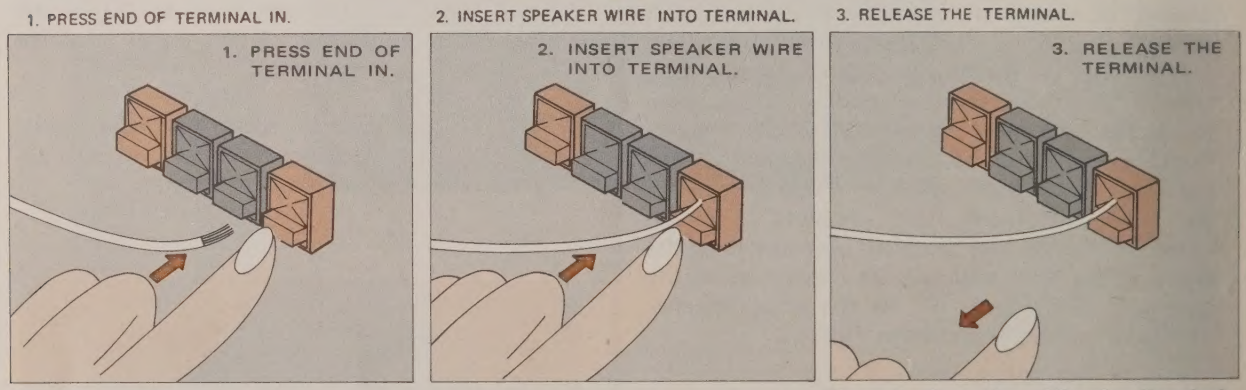
1. PRESS END OF TERMINAL IN.
2. INSERT SPEAKER WIRE INTO TERMINAL.
3. RELEASE THE TERMINAL.
1. PRESS END OF TERMINAL IN.
2. INSERT SPEAKER WIRE INTO TERMINAL.
3. RELEASE THE TERMINAL.

Figure 6. Operation of Speaker Terminals

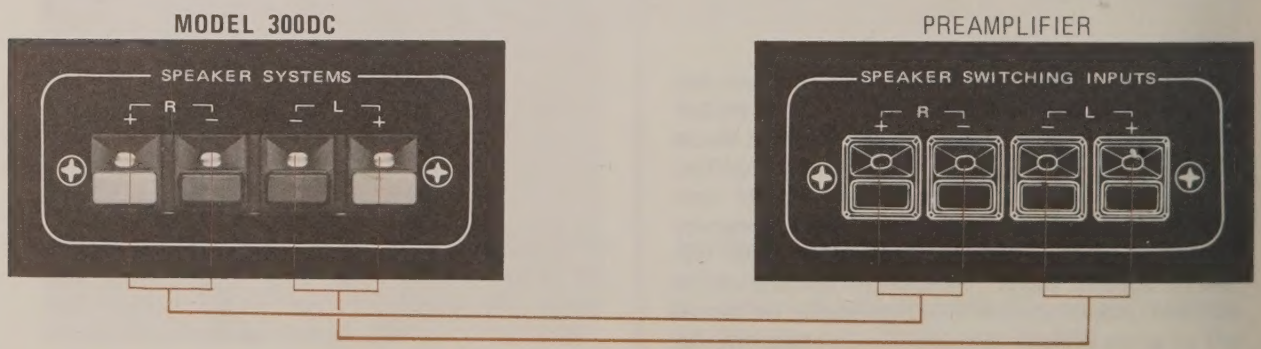

Figure 7. Connection to Speaker Switching Inputs

Figure 8. Front Panel

OPERATION

SIMPLIFIED OPERATING PROCEDURES

Before applying power or attempting to operate your amplifier, please make sure that you have complied with the instructions for mechanical and electrical installation. Then, follow these simple directions:

Step 1. Set the **AC COUPLING - DC COUPLING** switch to the **AC COUPLING** position.

Step 2. Reduce the volume control on the preamplifier to minimum and turn on **POWER** switch.

Step 3. Turn on the preamplifier. With the amplifier plugged into the "switched" preamplifier convenience outlet, both components will be turned on; the amplifier front panel will illuminate.

Step 4. Set the **LEFT** and **RIGHT GAIN** controls on the Model 300DC to mid position.

Step 5. Wait for the speaker protection relay to "click in" before turning up the volume. The Model 300DC amplifier contains a protection circuit that automatically disconnects the speakers until all amplifier circuits have stablized. This usually takes place four or five seconds after the amplifier is turned on.

Step 6. If you are using the SPEAKER SWITCHING circuitry in your preamplifier, switch on the appropriate speaker system.

Step 7. Now slowly increase volume at the preamplifier. Once you are familiar with volume control settings versus sound level, it becomes unnecessary to reduce the volume setting before turning on your audio system.

FRONT PANEL FEATURES

• POWER SWITCH

The **POWER** switch, when depressed, supplies AC power to the Model 300DC.

• GAIN CONTROLS

The Model 300DC is provided with separate **LEFT** and **RIGHT GAIN** controls capable of individually setting the left and right channel volume levels. These controls are convenient when using the Model 300DC in conjunction with other amplifiers (in a "bi-amp" or "tri-amp" speaker system), or when using the Model 300DC as a rear-channel amplifier in a 4-channel system. The **GAIN** controls may also be used for matching the input sensitivity of the Model 300DC to the output level of the preamplifier.

• METERS

The Model 300DC is provided with two illuminated VU meters for monitoring the relative output level of the left and right power amplifier channels.

• METER RANGE SWITCHES

The **METER RANGE** switches allow the meters to be operated in a sensitivity range most suitable for monitoring the particular loudness level at which the Model 300DC is being operated. There are four pushbuttons:

OFF The meter circuit is disconnected from the amplifier.

-20 dB The **-20 dB** position corresponds to approximately 1.5 watts continuous output at 0 dB.

-10 dB The **-10 dB** position corresponds to approximately 15.0 watts continuous output at 0 dB.

0 dB In the **0 dB** position the meters will register 0 dB when the amplifier is driven with a continuous sine wave signal to a power output of approximately 150 watts (into an 8 ohms load).

Since all meter movements have a certain amount of inertia, their response tends to lag fast-rising audio transients. In fact, under dynamic conditions when music is being played through the amplifier, the meter actually lags the music peaks by about 10 dB. It is, therefore, possible for such transients to cause the Model 300DC to reach the point of clipping (distortion) for an instant, even though the meters may not indicate full power operation. In other words, the meters indicate an **average value** reading with which to monitor the average power output and balance of the two channels.

• PEAK INDICATORS

The Model 300DC is equipped with separate left and right channel peak indicators. The peak indicators, unlike the meters, react instantaneously to audio transients. Each indicator illuminates if (1) excessively high input signals or transients are causing the amplifier to clip, or if (2) the current limiter circuit is activated by an output load of excessively low impedance. By using the peak indicators in conjunction with the meters and **GAIN** controls, optimum output level for minimum distortion can be obtained.

NOTE

When the amplifier is first turned on, the peak lights may glow for a moment until after the amplifier circuits have stabilized. This condition is normal and is no cause for alarm.

TECHNICAL SECTION

The following pages will explain the Model 300DC from a more technical standpoint. This section contains a description of some of the technical features of the Model 300DC, graphs depicting typical distortion measurements, a block diagram with a brief circuit explanation, and a complete list of specifications.

TECHNICAL HIGHLIGHTS

• PARALLEL OUTPUT STAGE

The most important portion of any power amplifier is its output stage. It is the output stage that supplies the power to the speakers, and its design directly affects the performance, reliability, and heat dissipation of the amplifier.

The output stage for each channel on the Model 300DC consists of a pair of parallel push-pull, complementary symmetry transistors (PNP, NPN), having massive current handling and heat dissipation capabilities. The parallel arrangement of the output transistors is an improvement over previous designs, providing higher current gain and power handling, especially into high frequencies and low impedance loads. At the same time, each individual transistor is operated well within conservative design limits. The result is a very broad safe operating area.

• PROTECTION CIRCUITS

There are several protection circuits built into the Model 300DC which protect the amplifier and other components in your system from accidental damage. They include load line limiting overload protection, a speaker protection relay, and a dynamic shunt meter circuit.

• OVERLOAD PROTECTION

The overload protection circuit limits or "clamps" the signal drive current available to the amplifier's pre-driver stage. It is activated by a combination of excessive output voltage and output current. It also works as a function of time.

Many amplifiers that have marginal safe operating areas depend on instantaneously-acting current protection circuitry to protect the output transistors. This circuitry can cause very objectionable audible distortion on high level musical material because the protection circuit acts so quickly, it "clips" or limits the transient peaks.

In the 300DC, the design of the protective circuitry takes into account that the output transistors can handle high-level transients for brief periods of time. Because of the 300DC's inherent extra margin of safe operating area, the protective circuitry is designed to attack more slowly. It will come into full operation only when handling a longer term overload condition lasting more than five milliseconds. This protects the amplifier, yet assures that the short term transients that belong in the program material are not clipped or limited.
Thermal compensation circuits are also provided to ensure highly stable operation under severe temperature and signal handling conditions.

• SPEAKER PROTECTION RELAY

The speaker protection relay prevents damage to the speakers by automatically disconnecting them in the event of transistor failure. This action is brought about whenever the relay circuit senses DC voltage or frequencies below 5 Hz at the amplifier output.
The relay is also activated by a time delay circuit when the amplifier is turned on. This time delay circuit keeps the speakers disconnected for about 5 seconds after power is applied, allowing the power supplies of all system components time to stabilize. This prevents turn-on transients or "pops" from reaching the speaker system.

• DYNAMIC SHUNT METER CIRCUIT

The mechanisms of VU meters such as used on the Model 300DC are delicate, precision devices. The magnetic coils that move the meter needle are constructed of very fine wire which can be overheated with excessive current. Therefore, to protect these fragile parts, the Model 300DC utilizes a dynamic shunt meter circuit.
The dynamic shunt circuit examines the amount of current going through the meter. If this amount exceeds a certain preset threshold, a transistor automatically bypasses or "shunts" the excessive current. This not only protects the coils from damage, but also prevents the needle from slamming into its limiting peg.

• PEAK INDICATOR

The Model 300DC incorporates a unique peak overload indicating circuit. Unlike many overload indicating displays that produce large errors when the AC line voltage powering the amplifier fluctuates or when the impedance of the speaker is changed, the Marantz peak indicator circuit is designed to follow variations in power supply voltage and load impedance. It automatically compensates for these variables so that an accurate indication of the true overload (clipping) point will always be indicated.

• CIRCUIT DESCRIPTION

Figure 11 is a block diagram of the Model 300DC Stereo Power Amplifier showing the main functional elements and input and output signal routing. For clarity, only the left channel is shown. The right channel is identical. The speaker protection relay is common to both channels.
Line level audio signals are first applied to the two GAIN control potentiometers which establish the range of input signals required to derive full power output. Signals are then routed to a differential input amplifier and pre-driver circuit which amplify the signal to sufficient levels to drive the output stages. From the input of the differential amplifier circuit, the amplifier stages are direct coupled through to the loudspeakers providing instantaneous recovery from any overdriven condition.
The output stage for each channel consists of a pair of parallel push-pull, complementary symmetry transistors (PNP, NPN), having massive current handling and heat dissipation capabilities.
A speaker protection relay protects the speakers in the event of transistor failure, and eliminates low frequency transients when the unit is turned on or off.
The meter circuit incorporates a Dynamic Shunt which automatically protects the meter movement from excessive output signal levels.

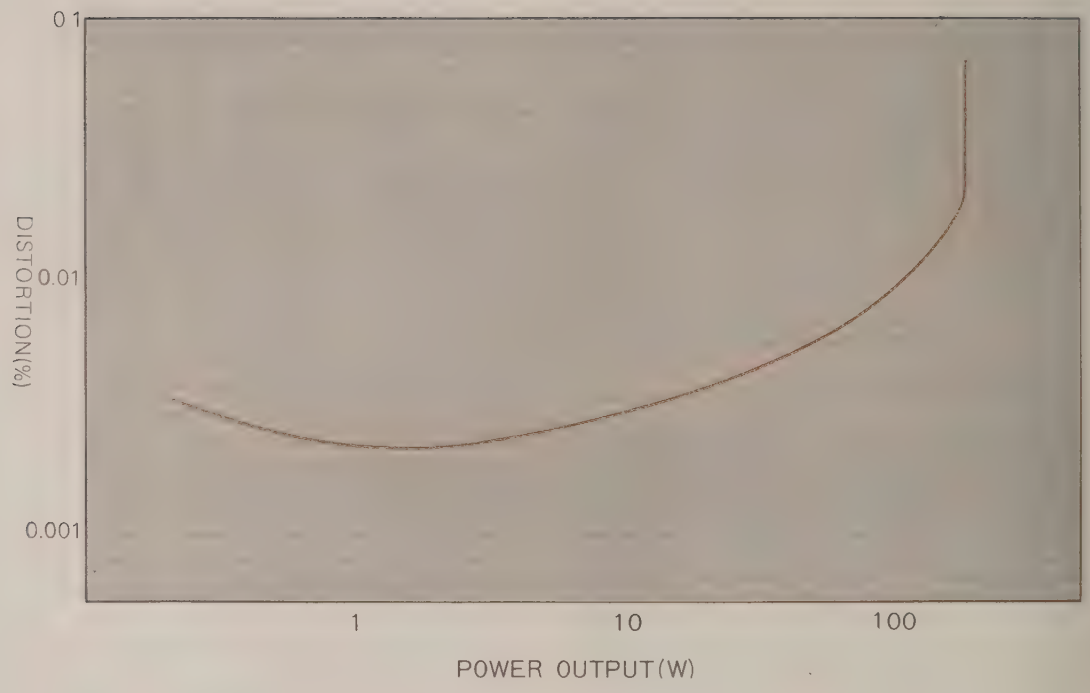

Figure 9. Typical Intermodulation Distortion Characteristics

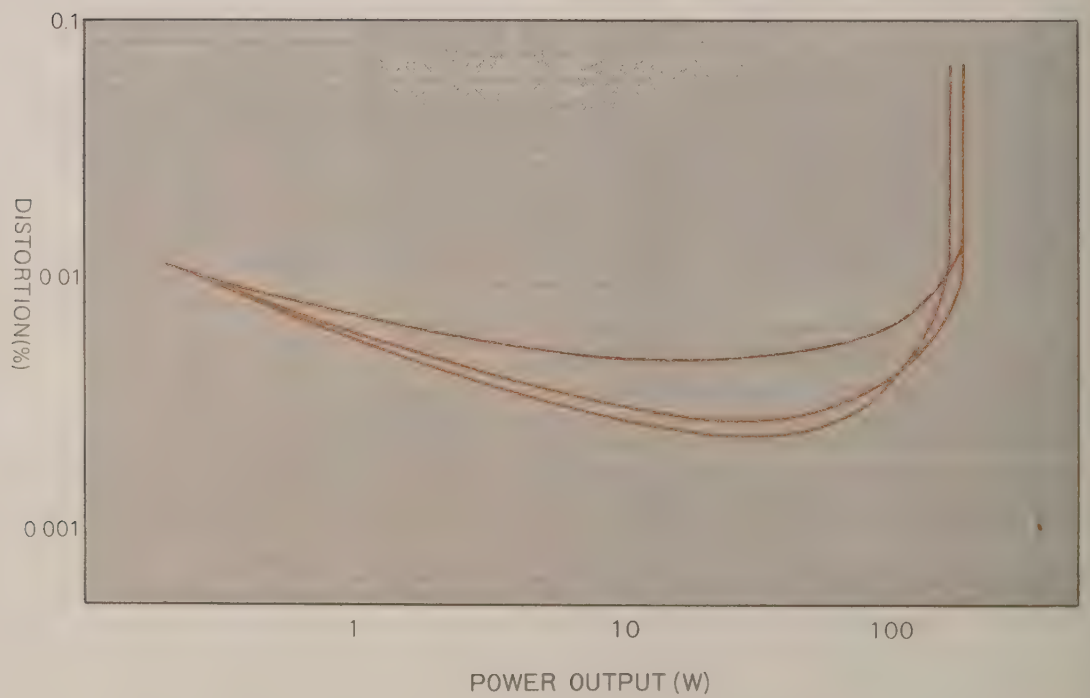

Figure 10. Typical Total Harmonic Distortion Measurements

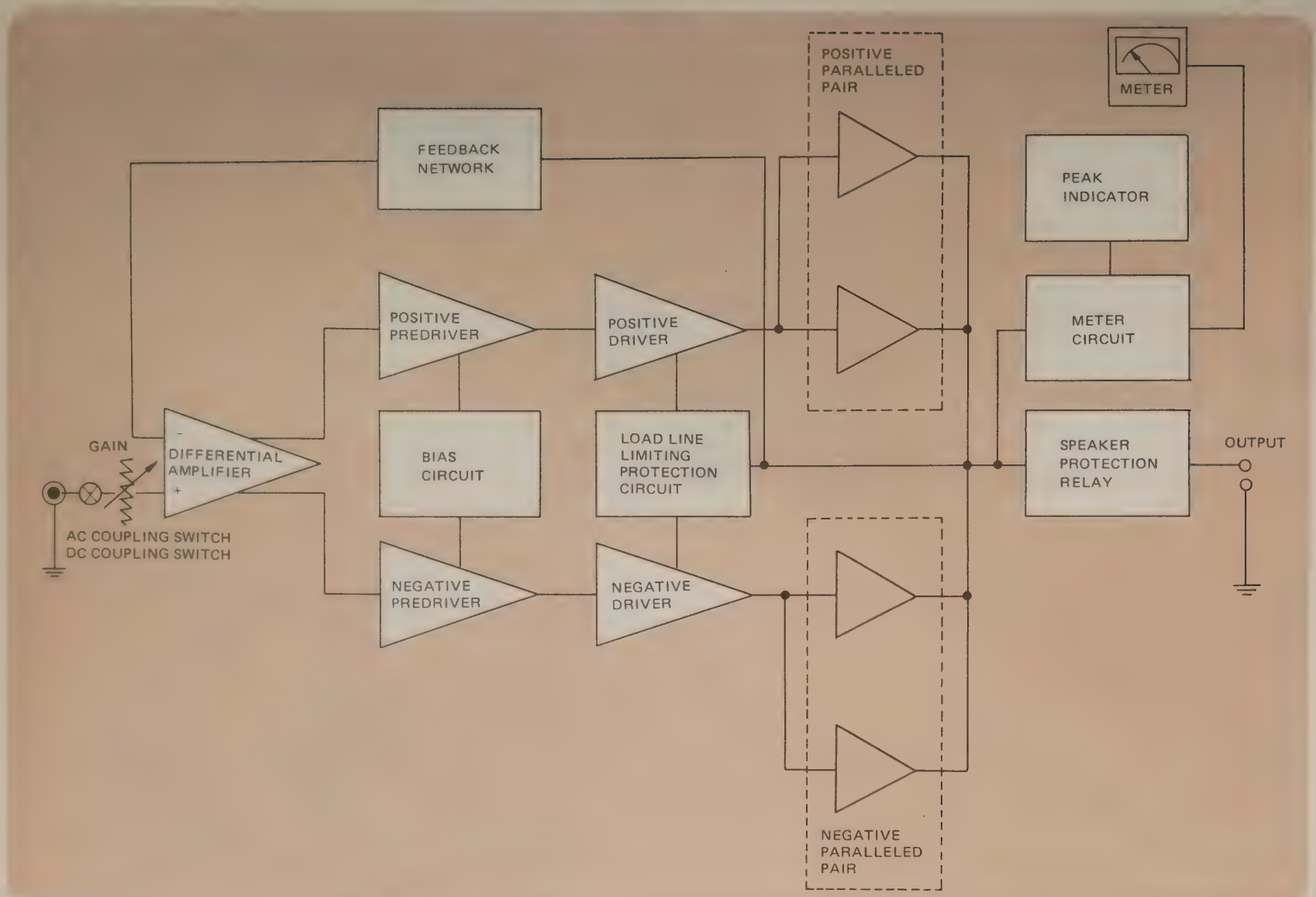

Figure 11. Functional Block Diagram

MAINTENANCE

• CLEANING

The satin gold anodized finish of the knobs and heavy aluminum front panel will last indefinitely with proper care and cleaning. Never use scouring pads, steel wool, scouring powders, or harsh chemical agents, such as lye solution. These will mar the finish. Clean with a soft, lint-free cloth or cotton swab slightly dampened with a mild solution of detergent and water.

• FUSE REPLACEMENT

The Model 300DC is protected by a 5-amp 250 V fuse. In the event the fuse blows out, replace it ONLY with a fuse of the same type and rating. Replacement with a fuse of higher rating will not protect the instrument and will void the warranty.

• IN CASE OF DIFFICULTY

If the amplifier operates normally, but has either partial or no panel illumination, one or both panel lamps probably require replacement. If the amplifier does not operate, make sure the power cord is connected, and that the preamplifier is providing operating power to the amplifier. If the power cord is all right and your unit is equipped with an external AC line protector fuse, check the fuse and replace it if necessary. If the panel is properly illuminated but one channel is inoperative, check the loudspeaker cord of the inoperative channel for a short circuit, broken wire, loose connection, or other fault. If loudspeaker connections appear satisfactory, check for a broken, open, shorted, corroded, or disconnected shielded cable between amplifier and preamplifier. Look for any other visible fault. If no fault is noted, turn off the preamplifier, then transpose (left for right) the shielded amplifier cables at preamplifier. If the opposite channel becomes inoperative when turned back on, replace the shielded cable. If same channel remains inoperative, turn off power and similarly transpose the loudspeaker leads at the amplifier. If when the system is turned on there still is no sound from the same speaker system, then either the loudspeaker system or the loudspeaker cord is at fault. If the opposite speaker system fails to operate, then the amplifier is inoperative. Refer the problem to your nearest authorized Marantz Service Facility.

• REPAIRS

Only the most competent and qualified service technicians should be allowed to service the Model 300DC. The Marantz Company and its factory-trained warranty station personnel have the knowledge and special equipment needed for repair and calibration of this precision instrument.
In the event of difficulty, call the toll free telephone number listed on the back of the Warranty to obtain the name and address of the Marantz Authorized Service Station nearest your home or business. In many cases, the dealer where you purchased your Marantz unit will be equipped to provide service.

REPACKING FOR SHIPMENT

Should it become necessary to repack your Model 300DC for shipment to the factory, to an authorized service station, or elsewhere, please observe the following precautions:

a. Do not ship the unit installed in its accessory walnut cabinet; remove the unit from the cabinet before packing.

b. Pack the unit carefully, using the original material as shown in Figure 12.
PLEASE NOTE that if you have discarded, lost, or damaged the packing material, new packing material may be obtained by writing to the Marantz Technical Services Department. The carton, its fillers, and packing instructions will be returned to you at a nominal charge.

c. Ship via a reputable carrier (do not use Parcel Post) and obtain a shipping receipt from the carrier.

d. Insure the unit for its full value.

e. Be sure to include your return address on the shipping label.

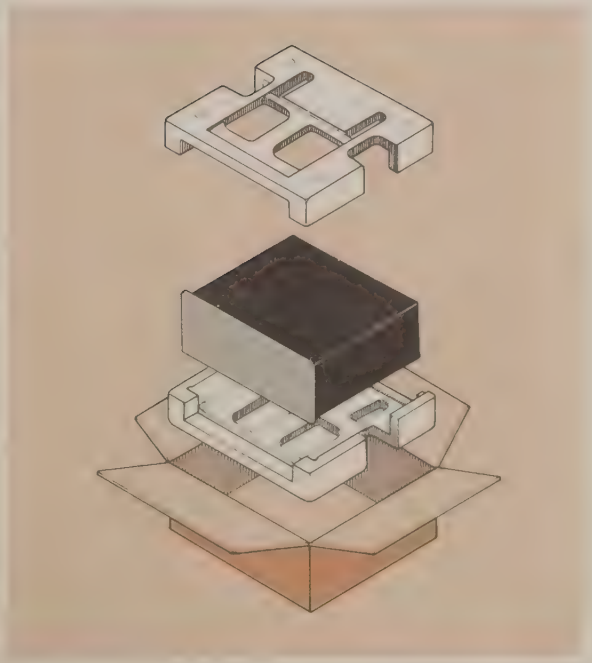

Figure 12. Repacking Illustration

The Sound of Marantz
is the compelling warmth of a Stradivarius.
It is a dancing flute, a haughty bassoon
and the plaintive call of a lone French horn.
The Sound of Marantz is the sound of beauty,
and Marantz equipment is designed to bring you
the subtle joy of its delight.
Wonderful adventures in sound await you
when you discover that the Sound of Marantz
is the sound of music at its very best.

Printed in Japan

2979851012

marantz

Golden Warranty

Limited Warranty

Marantz Company, Inc. proudly warrants Marantz products to be free of manufacturing defects in material and workmanship as follows:

Product	Duration of Warranty Parts	Labor
Receivers*, Tuners*, Amplifiers and Preamplifiers	3 Years	3 Years
Tape Decks, Turntables** and Electronic Accessories	2 Years	2 Years
Speaker Systems (including Cabinets)	5 Years	5 Years
Car Stereo Radios, Tape Players, Radio/Tape Combinations, Tuners and Power Amplifiers	1 Year	90 Days
Car Stereo Speaker Systems	1 Year Exchange	
Accessories (including Cabinets and Rack Adapters)	90 Days	90 Days

*Oscilloscope tubes and labor for repair or replacement are warranted for only ninety (90) days from date of purchase.

**Drive belts and labor for repair or replacement are warranted for only ninety (90) days from date of purchase. Stylus and cartridge are not warranted.

NO WARRANTY, WHETHER EXPRESS OR IMPLIED, IS GIVEN OR MADE WITH RESPECT TO ANY ACCESSORY SUPPLIED WITH PRODUCTS DESCRIBED ABOVE.

This Warranty and the extent of the responsibility of Marantz Company, Inc. hereunder are subject to the following conditions and limitations:

If your Marantz product should prove defective in material or workmanship within the prescribed period from date of purchase, Marantz Company, Inc. will repair or replace the product, in its sole discretion, without charge, upon presentation of satisfactory proof of purchase. (It is the responsibility of the consumer to establish proof and date of purchase; the purchase receipt or invoice is adequate for such proof.)

THIS IS NOT A SERVICE CONTRACT. THIS WARRANTY DOES NOT INCLUDE MAINTENANCE, CLEANING, PERIODIC CHECK-UP OR CHARGES INCURRED FOR REMOVAL OR REINSTALLATION OF PRODUCT.

For Warranty service, simply follow the instructions on the reverse side of this Warranty.

This Warranty is void if the serial number has been altered or removed from a serialized product; if the product is modified in any manner which Marantz concludes, after inspection, affects the reliability of the product; if the product has been repaired or serviced by anyone other than an AUTHORIZED Marantz Service Station; if the product is damaged because not properly installed, maintained or operated in accordance with the instructions which accompany the product.

Marantz Company, Inc. reserves the right to make changes in design and/or improvements upon its products without any obligation to include these changes in any products theretofore manufactured.

TO THE EXTENT NOT IN CONFLICT WITH APPLICABLE LAW, THIS WARRANTY EXTENDS ONLY IN FAVOR OF THE ORIGINAL PURCHASER AND SHALL BE VALID ONLY IF THE PRODUCT IS PURCHASED AND WARRANTY SERVICE SOUGHT WITHIN THE UNITED STATES OF AMERICA, INCLUDING POSSESSIONS AND TERRITORIES. EXCEPT TO THE EXTENT PROHIBITED BY APPLICABLE LAW, ALL IMPLIED WARRANTIES MADE BY MARANTZ IN CONNECTION WITH THIS PRODUCT INCLUDING WARRANTIES OF MERCHANTABILITY OR FITNESS ARE LIMITED IN DURATION TO THE WARRANTY PERIOD SET FORTH ABOVE, AND NO WARRANTIES WHETHER EXPRESS OR IMPLIED, INCLUDING WARRANTIES OF MERCHANTABILITY OR FITNESS, SHALL APPLY TO THIS PRODUCT AFTER SAID PERIOD HAS EXPIRED. THE CONSUMER'S SOLE REMEDY SHALL BE REPAIR OR REPLACEMENT AS IS EXPRESSLY PROVIDED ABOVE; AND UNDER NO CIRCUMSTANCES SHALL MARANTZ BE LIABLE FOR ANY LOSS OR DAMAGE, DIRECT OR CONSEQUENTIAL, ARISING OUT OF THE USE OF, OR INABILITY TO USE, THIS PRODUCT.

Some states do not allow limitations on how long an implied warranty lasts or the exclusion or limitation of incidental or consequential damages, so the above limitations or exclusion may not apply to you. This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

Marantz Company, Inc. is a wholly-owned subsidiary of Superscope Inc., 20525 Nordhoff Street, Chatsworth, California 91311.

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INSTRUCTIONS FOR OBTAINING WARRANTY SERVICE

1. For Warranty service, send the product to the Marantz Branch Service Center nearest you. Refer to paragraph 4 for shipping instructions and to the list of Branch Service Centers below.

MARANTZ BRANCH SERVICE CENTERS

CALIFORNIA
California Service Center
20525 Nordhoff Street
Chatsworth, California 91311

San Diego Service Center
6506 El Cajon Blvd.
San Diego, California 92115

ILLINOIS
Superscope Chicago, Inc.
1300 Norwood Avenue
Itasca, Illinois 60143

MICHIGAN
Superscope Detroit, Inc.
591 Executive Drive
Troy, Michigan 48084

NEW YORK METROPOLITAN AREA
Superscope New York, Inc.
56-08 37th Avenue
Woodside, New York 11377

TEXAS
Superscope Texas, Inc.
3214 Beltline Road
Dallas, Texas 75234

2. In the event no Marantz Branch Service Center is located near you, dial the following toll free numbers and the operator taking your call will provide you with the name and address of one or more Authorized Marantz Service Stations located near you in the continental United States.

Call toll free 800-447-1970 (In Illinois 800-322-0800) Ask for Marantz Service.

3. For Alaska and Hawaii, dial the following toll free number for the location of your nearest Authorized Marantz Service Station:

Call toll free 800-447-0890 Ask for Marantz Service.

4. If you decide to ship the product for Warranty service, please make sure you follow these additional instructions. All shipping charges must be prepaid. If the requested repairs or service (including parts replacement) are within the terms of the Warranty, Marantz will pay return shipping charges only to a designated point within the United States, including the District of Columbia. If warranty service is requested, enclose proof of purchase (such as copy of your dated purchase receipt.) If the entire instrument is sent, it must be shipped in its original package. No accessories should be shipped with the product. If any accessories are shipped with the product, Marantz shall have no liability whatsoever for loss of or damage to any such accessories, nor for the safe return thereof.

5. Do not dispose of this Warranty after it expires. In the event your product requires future service or repair after expiration of the Warranty, these instructions should be followed to enable you to obtain proper service which, of course, will be at your expense.

marantz